

IN THE UNITED STATES COURT OF FEDERAL CLAIMS

In re UPSTREAM ADDICKS AND BARKER
(TEXAS) FLOOD-CONTROL RESERVOIRS

Sub-Master Docket No. 17-9001L

THIS DOCUMENT APPLIES TO:

Judge Charles F. Lettow

ALL UPSTREAM CASES

PLAINTIFFS' JUST COMPENSATION POST-TRIAL BRIEF

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INTRODUCTION

Six Plaintiffs seek just compensation for the permanent flowage easement the United States took by flooding their properties during Tropical Storm Harvey. The Takings Clause imposes a clear and categorical obligation on the government to put each of the Test Property Plaintiffs in “as good a position pecuniarily” as if the taking had never occurred. The constitutional indemnification mandates that the government compensate each Plaintiff for (a) the permanent, noncategorical property interest taken over each Plaintiff’s property, (b) the temporary lost use of that property, and (c) the personal property destroyed during the act of taking itself. And the government must pay interest on the total amount from the date of its taking.

No formula or set of “inexorable rules” provide a definitive process to assess just compensation. Instead, takings jurisprudence calls for an ad hoc, factual inquiry derived from basic equitable principles with the purpose of providing just compensation for all property rights taken from each Plaintiff: permanent and temporary, real and personal. And the focus rests on compensation for the losses suffered by the owner, not the rights gained by the government. As famously expressed by Justice Holmes, “[T]he question is, What has the owner lost? not, What has the taker gained.” *Boston Chamber of Commerce v. Boston*, 217 U.S. 189, 195 (1910).

The parties presented two very different reckonings. Plaintiffs’ experts valued the property rights taken, including the imposition of a permanent flowage easement that gives the government the right—forever—to flood each property in the future to achieve the purpose for which the Addicks and Barker dams were built. And they did so by assessing the properties as required by the appraisal standards that the government should have followed (but did not). In contrast, the government’s appraiser valued properties that had been flooded but repaired—and did so using a methodology which cannot have measured the property interest required to be valued: the permanent flowage easement. On this record, only Plaintiffs provided proof upon which this Court may rely.

ARGUMENT

The record at trial eradicated any notion that the taking in this case was a minor nuisance, or any argument that its “occasional use” by the Corps diminishes the compensation due. Each Test Property suffered from the imposition of detained flood waters into their homes and neighborhoods. The permanent flowage easement allows the government to affect the same level of ruination upon each property every time the United States exercises its appropriated right forever and without further compensation for any future flooding. Once market participants grasp the economic consequences of the government’s permanent flowage easement—as opposed to the mere fact that these properties flooded—the fair market value of each property will plummet. And only then will the real effect of the permanent flowage easement become clear. It is for that loss (i.e., the diminution in fair market value of the Test Properties), as well as the losses suffered as a consequential result of the taking, that the government must pay as just compensation.

I. The Factual Evidence Presented at Trial Substantiated Each Test Property Plaintiff’s Devastating Losses.

This Court previously found that, within its physical parameters as defined by reference to the elevation of the pools at their highest level (*viz.* 101.6 feet in Barker and 109.1 feet in Addicks), the United States took a permanent flowage easement that also “encompassed plaintiffs’ personal property, fixtures, and improvements damaged or destroyed by the flood event that climaxed on August 30, 2017.” *In re Upstream Addicks and Barker (Texas) Flood-Control Reservoirs*, 146 Fed. Cl. 219, 247, n.17 (2019); *In re Upstream Addicks and Barker (Texas) Flood-Control Reservoirs*, 148 Fed. Cl. 274, 278 (2020). In so doing, the Court found that the flooding of the Test Plaintiffs’ properties “was sufficiently severe to rise to the level of a compensable taking.” 146 Fed. Cl. at 251. The testimony at trial by each Test Property Plaintiff provided a more complete basis upon which this Court can appreciate the catastrophic impact that the government’s taking had on their lives, their property, and the properties’ values.

A. Christina Micu.

“The land owned by plaintiff Christina Micu is a residential property situated within the Barker Reservoir in Katy, Texas at 6411 Canyon Park Drive. The finished first floor of the home is set at a 99.8-foot elevation. Flooding within the home attendant to Harvey reached approximately two feet. Ms. Micu and most of her family evacuated the home prior to Harvey. Her husband gained access to the home via kayak on September 2 and she returned on September 5, finding mold growth and extensive destruction of personal property. Flood water was present in the home for about ten days. The Micu family was forced to reside with a friend and then rent an apartment before moving back into their home a year after Harvey.” 146 Fed. Cl. at 242-43.

Ms. Micu described the consequences of flooding on her four bedroom, two-and-a-half bath, two-story property.¹ The Micus purchased 6411 Canyon Park Drive to raise their family in a safe neighborhood located in the Katy Independent School District, expecting it to “appreciate in value over time.”² Ms. Micu, who was not in Houston at the time of Harvey, described what she confronted when she was able to return home some two weeks after the flooding: “When we first got back inside, there was mud on the wood floors, the wood floors were warped, the carp- -- the rug was full of mud, furniture moved. Water, you know, still on the carpet -- I mean the rug. Mold growing up the walls. And it just smelled really, really bad.”³

¹ Tr. 101:2-8 (Test. of Christina Micu).

² Tr. 101:2-102:15 (Micu).

³ Tr. 103:3-8 (Micu). As the government’s expert David Hooper from Madsen, Kneppers & Associates (“MKA”) testified during the trial on liability, every water-related event requires an inspection and treatment for mold damage, and the need for further remediation to address mold growth must be assessed if the property was inundated for more than 48 hours (as was the case here) – and to determine if the structure must simply be demolished. Liability Tr. 2878:13-23, 2896:25-2897:17, 2934:2-2935:10 (Test. of David Hooper).

With the home uninhabitable, Ms. Micu detailed the steps necessary to remediate the home before repairs could even be started.

Well, first you had to throw all your stuff out on the curb. And then after that, you know, you had to demo down the walls, take everything out that was within the walls, insulation, the sheetrock, and then you had to -- I had to let the house dry out. We let it dry out for several months. I mean, from the wood frames, the foundation, everything got really dry. And then we started to remediate the mold. That was a long process. And then after that, it was like, okay, now we were ready to start to repair the house.⁴

The testimony and exhibits admitted at trial showed the state of the Micu home.⁵ The flood required the gutting of the damaged structure and removal of its contents. And the repairs proceeded over the next year. Further, Ms. Micu prepared a detailed catalog of items lost or destroyed as a result of the government's flooding. In short, the flood resulted in dreadful losses—both financial and personal—to the Micu family.

Micu-JC 192



Micu-JC 143



⁴ Tr. 103:18-104:2 (Micu).

⁵ Tr. 104:7-119:7 (Micu).

Micu-JC 189**Micu-JC 55**

While only photographs showing the devastation experienced by Ms. Micu are presented in Plaintiffs' brief, hers is an ordeal common to all Test Property Plaintiffs. The record contains a myriad of images depicting similar destruction visited on each.

B. Christina and Todd Banker.

“[The Bankers own] a residential property situated within the Barker reservoir in Katy, Texas at 4614 Kelliwood Manor Lane. The finished first floor of the home is set at a 100.7-foot elevation. Flooding within the home attendant to Harvey reached approximately 1.1 feet. The Bankers evacuated their home on the morning of August 28 and returned on September 4. During that period, flood water was present in the home for approximately four days. In addition to structural damage to the home, much of the Banker's personal property was destroyed by the flooding, and the home was uninhabitable for about seven months while it underwent remediation.” 146 Fed. Cl. at 241. Todd Banker's testimony and exhibits at trial spelled out the impact of their losses.

The Bankers live in a two-story, four bedroom, three and one-half bath brick home set on a 9600 square-foot lot right on the edge of government-owned land adjacent to Barker reservoir which they purchased in 2007.⁶ The Bankers moved to their home in Katy, Texas “to be in a good school

⁶ Tr. 758:23-760:1 (Test. of Todd Banker).

district” and because of the private nature of the Kelliwood Park neighborhood.⁷ Mr. Banker described the initial attempt to save their personal property until the rising flood waters forced their evacuation.⁸ Their home remained submerged in about a foot of water for three or four days, at which time they returned to find “this mucky sludge all over, so it smelled. The – obviously the – we had some wood floors that were buckling. Walls were stained from the water line. Could see some of the cabinetry was damaged. Some of the bigger furniture looked like it was damaged, curled.”⁹

To repair the home the Bankers first hired a firm to remediate the site.¹⁰ Thereafter, Mrs. Banker acted as a general contractor, hiring an architecture firm to oversee the process even though she was on site daily for hours to “make sure it was getting back together,” all the while shopping for replacement appliances and other necessities.¹¹ At trial Mr. Banker testified to the costs they incurred in repairing their property as well as some of the personal property they lost in the flooding.¹² Several exhibits were also admitted documenting the financial toll suffered by the Bankers from the property the government took.¹³

C. Elizabeth Burnham.

“The land owned by plaintiff Elizabeth Burnham is a residential property situated within the Addicks Reservoir in Houston, Texas at 15626 Four Season Drive. The finished first floor of the home is set at a 105.4-to-105.5-foot elevation. Flooding within the home attendant to Harvey reached approximately four to five feet. Flood water was present in the home for at least seven days. Ms.

⁷ Tr. 760:2-11 (Banker).

⁸ Tr. 760:25-761:23 (Banker).

⁹ Tr. 761:24-762:23 (Banker).

¹⁰ Tr. 765:10-18 (Banker).

¹¹ Tr. 764:7-765:6 (Banker).

¹² Tr. 766:4-773:10 (Banker).

¹³ See, e.g., PX-JC 278; Banker-JC 005, 006, 007, 010.

Burnham's personal property as well as the home suffered substantial damage. The home was uninhabitable for a period of months, at which time Ms. Burnham sold the property as is." 146 Fed. Cl. at 241-42.

Ms. Burnham filed suit in November 2017 and was then selected as a test property by the government in both the liability and just compensation phase.¹⁴ At trial Ms. Burnham described the experience of being forced from her home during Harvey and the losses of real and personal property she suffered.¹⁵ Ms. Burnham explained that she originally purchased her property because it was on a quiet cul-de-sac, affordable, close to her office, and "it got my daughter into the Katy school district."¹⁶ At the time of the purchase, Ms. Burnham was a single mother and the Four Season home served as the primary residence for Ms. Burnham and her son and daughter.¹⁷ Ms. Burnham testified that she owned the Four Seasons home outright, no mortgage debt at all, and that it was meant to be her "forever home."¹⁸ Josena Arquieta, Ms. Burnham's mother who is a named co-plaintiff in Ms. Burnham's case,¹⁹ never lived at the Four Season home, nor did she ever store or keep any personal property there.²⁰

Ms. Burnham told of her particular pride in the home which had recently been selected for the Weird Homes Tour, a display of special houses in the Houston area featuring unique attributes

¹⁴ Tr. 36:08-36:16 (Test. of Elizabeth Burnham).

¹⁵ Tr. 38:15-39:2 (Burnham).

¹⁶ Tr. 39:22-40:7 (Burnham).

¹⁷ Tr. 40:25-41:08 (Burnham).

¹⁸ Tr. 64:8-13 (Burnham).

¹⁹ See 17-cv-01786, ECF 9, March 31, 2022, Order adding co-owner Josena Arquieta as a co-plaintiff.

²⁰ Tr. 41:12-42:04 (Burnham) (Ms. Burnham explained that Ms. Arquieta was also listed on the warranty deed because Ms. Arquieta had facilitated the purchase of the Four Season home by taking a home equity loan on Arquieta's home).

and artwork, because it “was to show that my house was put back together nicely” and reflected “a portfolio” of her own work.²¹

At the time of the Harvey flooding in August 2017, Ms. Burnham had only recently completed the process of gutting, remediating, and repairing her home, and throwing out all the personal property inundated by the Tax Day flooding she experienced in April 2016.²² The Tax Day flooding lasted only a few hours and did not necessitate evacuation or displacement. The government’s deliberate and extended inundation of the Four Season home, however, forced Ms. Burnham and her family to evacuate and resulted in prolonged displacement of 233 days (August 25, 2017, through April 14, 2018).²³ Indeed, Ms. Burnham and her family never lived in the Four Seasons home again.²⁴ After living in a hotel for 1 month²⁵ and then an apartment for 6 months,²⁶ Ms. Burnham sold the Four Season home “as is” in February 2018 for a contract price of \$80,000²⁷ because she did not have the funds to repair it and it was no longer safe to live in; the home was vandalized while vacant.²⁸

In its cross examination of Ms. Burnham, the government (as it did with each Plaintiff) emphasized alleged defects and inadequacies in her testimony and recollection of flood-damaged or -destroyed items, such as an inability to describe the condition of each piece of furniture or to recall

²¹ Tr. 44:7-18 (Burnham).

²² Tr. 42:11-44:4 (Burnham) (discussing how Tax Day repairs and remediation were a “paycheck to paycheck kind of thing”).

²³ Tr. 58:07-59:02 (Burnham).

²⁴ Tr. 46:25-47:6 (Burnham).

²⁵ See JX 1147 (Hotel Invoice).

²⁶ See Burnham-JC 38 (Apartment Lease Contract dated October 28, 2017).

²⁷ Tr. 54:03-17 (Burnham) (explaining that at the time of the February 2018 sale to Giering Investments Ms. Burnham did not know that the government had appropriated a permanent easement for flooding on and over the Four Season home); Tr. 80:01-10 (explaining her understanding that neighbors “don’t believe the government will store water in their houses on purpose); see Burnham 20 (Contract Amendment admitted in liability trial); Burnham-JC 94 (general warranty deed dated February 5, 2018).

²⁸ Tr. 48:6-54:9 (Burnham).

the purchase price of every item.²⁹ The government even tried to belittle the severity of the flooding itself by noting she “only had water on the first floor” of her home.³⁰

But her financial losses were significant. In addition to the real property losses attested to by Plaintiffs’ experts, Ms. Burnham testified that in her opinion the Four Season home was worth \$185,000 on August 25, 2017.³¹ Ms. Burnham also explained how she compiled a personal property inventory listing the personal property taken from her by the government’s prolonged flooding; describing to the best of her knowledge each item, the date it was purchased, and the replacement cost of the item³²—knowing she did not (and indeed could never) include every item she lost.³³

D. Scott Holland.

“The land leased by plaintiff Scott Holland is a residential property situated within the Addicks Reservoir in Houston, Texas at 1923 Wingleaf Drive. The finished first floor of the home is set at an elevation between 107.8 and 107.9 feet. Flooding within the home attendant to Harvey reached approximately 1.5 feet. Mr. Holland evacuated his home on August 28, a daunting process due to sutures in his stomach and chest still healing from a recent kidney surgery. Flood water was present in the home for about 3.5 days. The home suffered severe structural damage and much of Mr. Holland’s personal property was destroyed by the flooding. Because the home was uninhabitable and he was unable to afford repairs, Mr. Holland was forced to move away from Houston and reside in a small trailer, where he still lived at the time of trial.” 146 Fed. Cl. at 242.

²⁹ Tr. 89:11-90:10 (Burnham).

³⁰ Tr. 90:18-20 (Burnham).

³¹ Tr. 54:19-60:12 (Burnham).

³² Tr. 68:12-77:10 (Burnham); Burnham-JC 96 (amended inventory totaling \$22,717); ECF 534, Joint Stipulated Appendix, item 24, Burnham Amended Objections and Responses to Third Set of Interrogatories, at 4 (July 24, 2020) (providing narrative description of her methodology).

³³ Several exhibits were admitted during Ms. Burnham’s testimony supporting her statements and detailing her losses. *See* JX 1147, Burnham-JC 38, 47, 53, 62, 92, 94, 96, and Burnham 54a, 54b.

Mr. Holland was not physically able to testify at the just compensation trial.³⁴ In lieu of his testimony, the parties agreed to the admission of a compilation of his testimony given in response to written questions from the government along with exhibits detailing the personal property losses he suffered when the residential property he had been leasing was flooded.³⁵

As his written submissions show, on August 28, 2017, it took a team of paramedics using a rescue boat to evacuate Mr. Holland from the home he had been renting for several years because he was still recovering from major surgery. At the time he was rescued, water had already begun invading the front of the house; ultimately reaching a depth of some two feet and destroying virtually all of the personal property Mr. Holland owned. Because of the government's actions Mr. Holland's leasehold was completely taken and his personal property was destroyed, leaving him destitute and forcing him to live in five different emergency shelters before eventually moving into a recreational vehicle where he still lives.³⁶

E. Catherine Popovici.

"The land owned by plaintiff Catherine Popovici is a residential property situated within the Barker Reservoir in Katy, Texas at 19927 Parsons Green Court. The finished first floor of the home is set at a 102.2-foot elevation. No water entered inside the home, but it rose to the foundation and was within a couple of inches of entering and remained on the property between four and six days. The flooding around the home prevented ingress or egress and damaged wooden beams in the structure of the home." 146 Fed. Cl. at 243.

Ms. Popovici testified that she and her husband purchased their five bedroom, four bath, 6300 square-foot home in 2003 because "it was in a great school district, only a couple of miles from Mr.

³⁴ Tr. 1748:17-23.

³⁵ Holland-JC 28. Mr. Holland was never physically able to sit for an oral deposition.

³⁶ Holland-JC 28.

Popovici's office, and in a very beautiful, safe neighborhood where they could raise their children.³⁷ While the structure of the Popovici home (thankfully) was not inundated, floodwaters covered the entire front yard, went around the edge of the property, and extended over a portion of their backyard.³⁸

The flooding trapped the Popovics in their home for a week as they watched in fear while the water crept closer and closer to flooding inside the house, eventually reaching its foundation.³⁹ When they were finally able to leave, the Popovics found that their car had been damaged, that they had lost significant landscaping, that their wooden garage door needed repairs, and they subsequently discovered their air filtration system developed a mold problem.⁴⁰ She also testified to the huge increase in the cost of the excess flood insurance she carried in a single year's time.⁴¹ Ms. Popovici's testimony and service as a Test Property Plaintiff carries special significance as it is representative of thousands of property owners whose properties straddle the edge of the Harvey pool and who all must now disclose the taking of a permanent flowage easement over their property even though they suffered no structural flooding.

Ms. Popovici finished her direct testimony by explaining why she "definitely" believes her home value has been impacted:

[N]ow I realize that when I go to sell this property, I'm going to have to disclose that it was flooded. And in the newer disclosure statements, I've learned, because my mother died and I was executing her estate and had to sell the house, that the new disclosure statements require you to state if you know your property is in a flood pool. So I'm going to have to disclose all of this information. That in itself, I believe, is an impairment to the property.

³⁷ Tr. 788:9-790:1 (Test. of Catherine Popovici).

³⁸ Tr. 790:9-13 (Popovici).

³⁹ Tr. 790:14-791:14 (Popovici).

⁴⁰ Tr. 791:15-25 (Popovici).

⁴¹ Tr. 807:6-808:9; JX 1162; Popovici-JC 40.

Further, if you go around where I live nowadays and you're trying to buy a property and you look in the MLS, the Multiple Listing Service, if a property did not flood, people put that in capital letters, "Did Not Flood During Harvey." So we all know that carries a premium whereas those that flooded during Harvey are carried at a discount.

[F]rankly, I feel I was wronged when I bought that property and it was not disclosed to me at that time that it was in the flood pool. And I was very indignant to discover in the course of this lawsuit that the government was actually taking elevation measurements of all of the properties around me, including mine, so they would understand what would flood in the event of a flood. So there was a lot of inside knowledge that wasn't shared with the public, and so I bought this property not knowing this.

And even sitting here today listening to the FEMA testimony, I realize there are public-facing flood insurance rate maps or flood maps and then there's confidential maps that exist that are not shared with the public. So my sense of injustice continues. So I feel that the property has been tainted. It's been impaired. And all I'm asking for here is just compensation for that, whatever is fair.⁴²

F. Kulwant Sidhu.

"Plaintiff Kulwant Sidhu is the joint owner of 29 condominium units used as residential rental properties and situated within the Addicks Reservoir in Houston, Texas at 16111 Aspenglenn Drive. The property at issue in Mr. Sidhu's claim at trial consists of two of his 29 units: Unit 603 (a first-floor, downstairs unit) and Unit 604 (a second-floor, upstairs unit directly above Unit 603). The finished first floor of the condominium building in which the two units are located is set at an elevation of 107.0 to 107.1 feet. No flood water reached the upstairs unit and it was not physically damaged. Flooding within the downstairs unit attendant to Harvey reached approximately 2.4 feet and remained for about 4.5 days. The flood damage required gutting and renovating Unit 603—a process that took nearly a year, during which time the unit could not be rented." 146 Fed. Cl. at 243.

Mr. Sidhu testified concerning the losses he suffered by the flooding of the condominium complex containing the units he had purchased which were supposed to fund his retirement.⁴³ While

⁴² Tr. 812:1-813:14 (Popovici).

⁴³ Tr. 1713:23-1714:1 (Test. of Kulwant Sidhu).

only the downstairs unit, No. 603, suffered structural damage from the Harvey flooding, both units were impacted by the taking of the condominium common areas and the special financial assessment levied for their repair.⁴⁴

As for the downstairs unit, No. 603, Mr. Sidhu described his lost rental income, the extensive repairs that the unit required, and the effort and expenses he incurred in traveling from his California home to direct and oversee that work.⁴⁵ Those repairs took approximately a year given the shortage of labor and materials caused by the massive demand in Harvey's aftermath, and their costs were detailed by exhibits admitted at trial.⁴⁶

In closing his testimony Mr. Sidhu echoed the experiences and losses suffered by each Test Property Plaintiff and what each seeks in this case:

In 2017, my wife and I, we were retired. We had purchased these two condominiums along with 27 others to fund our retirement. It's good planning that came true. The retirement was a dream come true. But then in August of 2017, that dream turned into a nightmare. My rental properties flooded. The income stopped. I had to spend hundreds of thousands of dollars of my retirement funds to rebuild the properties. I had to spend many months away from my family. And then the nightmare continues to this day.

So I'm asking for justice. I'm asking for just compensation. And I'm asking to please, please, please bring this nightmare to an end.⁴⁷

II. The Expert Evidence Presented at Trial Confirmed the Tremendous Losses for which Compensation is Due.

The opinion testimony at trial confirmed the significant compensation due the Test Property Plaintiffs for the government's deliberate sacrifice of the Test Property Plaintiffs' homes and businesses to effectuate the Project's authorized purpose of protecting downtown Houston, the

⁴⁴ Tr. 1725:7-1726:3 (Sidhu).

⁴⁵ Tr. 1714:18-1734:4 (Sidhu).

⁴⁶ Tr. 1726:10-13 (Sidhu); Sidhu-JC 52, 52, 55, 57, 62, 83, 85, 89, 90, 91, 92.

⁴⁷ Tr. 1734:10-22.

Houston Ship Channel, and other downstream properties.⁴⁸ And expert testimony debunked any notion that the government is unlikely to use the permanent flowage easement in the future—it will.

A. Dr. Philip Bedient.

The strategy of the United States has included an attempt to minimize the just compensation owed Plaintiffs by asserting the government will only rarely use the easement to submerge Plaintiffs' properties. *See* ECF 507, United States' Pretrial Memorandum of Contentions of Facts and Law, at 10 & n.5. In keeping with this strategy, the government has trumpeted some of this Court's statements about "occasional flooding" that "is not expected to be regular or occurring on a frequent basis." The government's approach not only ignores the correct legal standard,⁴⁹ but also was repudiated by trial testimony from both Plaintiffs' expert Dr. Philip Bedient and the government's own witnesses.

In contrast to the government's cribbed portions of prior rulings, the Court has previously recognized the potential likelihood of future flooding: "the government's actions have subjected

⁴⁸ Tr. 1190:03-1193:15 (Test. of Robert Thomas) (Army Corps standard operating procedure was and remains to deliberately impose flooding on privately-owned upstream property to prevent damaging flood stages in downtown Houston and the Ship Channel turning basin).

⁴⁹ The legal scope of an easement is determined pursuant to state law. *Preseault v. United States*, 100 F.3d 1525, 1544 (Fed. Cir. 1996); *Capreal, Inc. v. United States*, 99 Fed. Cl. 133, 143 (2011). Under Texas law, the permanent flowage easement will provide the government an unrestricted right to flood the three-dimensional area encompassed by the easement and, simultaneously, prohibit the property owner from interfering with the government's use of the easement. *See Severance v. Patterson*, 370 S.W.3d 705, 721 (Tex. 2012) ("Easements exist for the benefit of the easement holder for a specific purpose. . . . Because the easement holder is the dominant estate owner and the land burdened by the easement is the servient estate, the property owner may not interfere with the easement holder's right to use the servient estate for the purposes of the easement."); *Barnett v. Havard*, No. 09-12-00310-CV, 2014 WL 2611153, at *4 (Tex. App.—Beaumont June 12, 2014, no writ) ("An easement is a nonpossessory interest in another's property that authorizes its holder to use that property for a particular purpose. The owner of the dominant estate has a duty to maintain the easement, and the owner of the servient estate has no right to interfere with the dominant estate."). And when valuing the rights taken, the Court must contemplate the maximum use of the easement by the government and maximum injury from that use to Plaintiffs. *Columbia Gas Transmission, LLC v. An Easement To Construct, Operate, & Maintain a 20 Inch Gas Transmission Pipeline Across Properties in Washington Cty., Pa. By Quature*, 745 F. App'x 446, 451 (3d Cir. 2018) (directing that when determining just compensation a court "must assume the use of the easement will be in a manner as injurious to the landowners' remaining rights in the property as the easement rights taken will lawfully permit." (cleaned up)).

plaintiffs' private properties to the possibility, rather probability, of government-induced flooding ever since the construction of these dams, throughout subsequent changes to the dams and reservoirs, and for at least the foreseeable future." *In re Upstream Addicks and Barker (Texas) Flood-Control Reservoirs*, 146 Fed. Cl. 219, 250 (2019). Even though each Plaintiff retains a fee simple interest in their properties "which allows them to continue their lawful use subject to the risk of occasional flooding caused by the operation of the Addicks and Barker Dams," 148 Fed. Cl. at 278, the Court recognized that "the sheer frequency of significant storms in the region both before and since construction of the dams—the Hearne storm, the Taylor storm, the 1929 and 1935 storms, Tropical Storm Claudette in 1979, the 1992 series of storms, Tropical Storm Allison in 2001, and the Tax Day Storm—suggests that [Harvey] was more than an isolated event, and that it is likely to recur," 146 Fed. Cl. at 250. Indeed, as this Court has found, between 1854 and 1935 six major floods occurred in the Buffalo Bayou watershed, two of which—in May 1929 and December 1935—so devastated the City of Houston that Congress passed the River and Harbor Act of 1938, authorizing the United States Army Corps of Engineers to design and build the Addicks and Barker Dams as part of the Buffalo Bayou and Tributaries, Texas Project ("Project"). 146 Fed. Cl. at 229-30. Even before the Project was constructed the government knew that "only chance [had] prevented the occurrence of a storm over the basin much larger than the 1935 storm." 146 Fed. Cl. at 229; *see also* Tr. 1339:3-1342:20 (Test. of Col. Timothy Vail) (discussing Exhibit JX 5, Buffalo Bayou, Texas Definite Project Report, June 1, 1940).

During the last 40 years the Greater Houston Area experienced additional severe storms, several of which the Corps recognized would have project-induced flooding of Upstream properties had they been centered over Addicks and Barker Reservoirs or the Upper Buffalo Bayou Watershed. 146 Fed. Cl. at 239. The abundance of major storms in the Greater Houston Area is not honestly contested by the government. And recent major storms (as well as the likelihood of similar future events) debunk any real argument about future use of the permanent flowage easement:

- In 1979, Tropical Storm Claudette dropped 43 inches⁵⁰ of rain in 24 hours on Alvin, Texas—50 miles southeast of the reservoirs—which caused the Corps to conclude that “the Projected Maximum Flood on an empty pool is considered a probable occurrence,” and that if Claudette “had occurred over the Addicks and Barker watersheds, their reservoir capacities may have been exceeded,” and that it would have taken “between approximately 53 and 55 days to remove enough water to get it back on government-owned land.” 146 Fed. Cl. at 239-40.
- In October 1994 the remnants of Hurricane Rosa produced 26-28 inches of rain in 72 hours over a 150-square mile area.⁵¹
- In June 2001, Tropical Storm Allison dropped almost 36 inches of rain in five days 50 miles northeast of the Addicks and Barker watershed in 2001,⁵² and “could have potentially exceeded reservoir capacity had the storm event occurred directly over the reservoirs,” again causing the Corps to recognize that, although the reservoirs had never previously flooded off government-owned land, “we know it can and probably will happen at some point in time.” 146 Fed. Cl. at 240.
- In September 2008, Army Corps’ records demonstrate that Hurricane Ike dumped 22 inches of rain in 72 hours over a 150-square mile area.⁵³
- In April 2016, the Tax Day Storm dropped 10-16 inches of rain in 12 hours; the Army Corp’s reservoir operations spawned reservoir pools that pushed the envelope of government-owned storage capacity.⁵⁴
- In August 2017, just over one year later, the predicted storm arrived when Tropical Storm Harvey stalled over the Houston metropolitan area for four days, dropping an average of 33.7 inches of rain over Harris County. The government concedes the Army Corps’ operations during and after Harvey generated reservoir flood pools to record elevations of 101.6 feet in Barker and 109.1 feet in Addicks on August 30, 2017. *Id.* at 240-41.

⁵⁰ Tr. 997:21-998:10 (Test. of Mario Beddingfield) (Army Corps’ chart demonstrates that Claudette rainfall over 72-hour duration was 36-38 inches over 150-square mile area); PX-JC 873, page 11, table 2 (Dr. Bedient Report).

⁵¹ Tr. 998:12-16 (Beddingfield); PX-JC 873, page 11, table 2 (Dr. Bedient Report).

⁵² Tr. 998:12-16 (Beddingfield) (Allison’s 72-hour rainfall was 24-26 inches over 150 square miles); PX-JC 873, page 11, table 2 (Dr. Bedient Report).

⁵³ Tr. 998:17-19 (Beddingfield); PX-JC 873, page 11, table 2 (Dr. Bedient Report).

⁵⁴ DX 1988, Addicks Reservoir Operations During Top Rainfall Events 2015-2020 (97% of government-owned storage capacity); DX 1989, Barker Reservoir Operations During Top Rainfall Events 2015-2020 (exceeded 100% of government-owned storage capacity); Tr. 1108:16-1109:04 (Beddingfield testimony that the Addicks Pool during Tax Day “got off of government land.”).

- Most recently, in September 2019, just two years after Harvey, Tropical Storm Imelda produced ~44 inches of rain over 72 hours in a 150-square mile area.⁵⁵

Using data and information created by the Corps' own engineers and scientists,⁵⁶ Dr. Bedient confirmed this Court's recognition that Harvey "was more than an isolated event, and ... is likely to recur." 146 Fed. Cl. at 250.⁵⁷ Dr. Bedient's report is based on an independent study of storms and attendant flooding experienced since 1979, as well as his work in co-authoring an August 2020 paper that undertook an analysis of 600 rain gauges in the Houston area.⁵⁸ Dr. Bedient further noted that his work used data from ATLAS-14 as it includes "the latest and greatest information" available.⁵⁹

Using more stationary data from flood events during the period of record 1982-2018, which attempt to take into account the effects of urbanization and increased rainfall intensities and

⁵⁵ Tr. 999:02-07 (Beddingfield); PX-JC 873, page 11, table 2 (Dr. Bedient Report).

⁵⁶ The data set for the Corps' pool elevation frequency curves did not have stationarity (*i.e.*, "stationarity is that your current conditions reflect in your past conditions") and, as a result, does not account for the effects of urbanization or increasing rainfall intensities and frequencies, which would generate higher reservoir pool elevations. Tr. 951:12-952:05; Tr. 953:02-12; 969:01-973:03 (Beddingfield).

⁵⁷ During the prior liability trial, the Court accepted Dr. Bedient as an expert in hydrology, hydraulics, and floodplain analysis. 146 Fed. Cl. at 244. For this testimony, Dr. Bedient expanded on his qualifications and experience, and explained the data and methodology he used when undertaking his study and preparing his report, after which the Court accepted him as an expert to provide opinion testimony on stage frequency analysis concerning flooding that would exceed the government-owned land and up to the Harvey-level of inundation in Addicks and Barker Reservoirs. Tr. 1218:10-1236:9. (Test. of Dr. Bedient).

⁵⁸ Tr. 1267:18-1272:4.

⁵⁹ Tr. 1277:12-24 (Bedient); Tr. 1137:08-23 (Test. of Robert Thomas) (NOAA Atlas 14 data reflects Harvey rainfall); *see also* Vol. 1, NOAA Atlas 14 Precipitation-Frequency Atlas of the United States, at 1 (<https://hdsc.nws.noaa.gov/hdsc/pfds/docs/NA14Vol1.pdf>) ("NOAA Atlas 14 contains precipitation frequency estimates with associated confidence limits for the United States and is accompanied by additional information such as temporal distributions and seasonality. The Atlas is divided into volumes based on geographic sections of the country. The Atlas is intended as the official documentation of precipitation frequency estimates and associated information for the United States."). In contrast, the government's evidence at trial was based on a period of record spanning 150 years, based on an assumption that rainfall and climate conditions are "stationary;" that they do not change over time. Tr. 2036:10-17, 2049:1-2050:2 (Test. of Mark Glaudemans).

frequencies,⁶⁰ Dr. Bedient was able to demonstrate that, despite its characterization as a 500- or 1,000-year event as commonly proclaimed in Harvey's immediate aftermath,⁶¹ Harvey rainfall over Addicks and Barker is actually in the range of a 100-year event and that the recurrence of a Harvey-level pool for both Addicks and Barker is significantly below a 100-year frequency; the expected frequency of recurrence of structure flooding for the six test properties ranges from 30-75 years,⁶² and lot flooding ranges from 22-43 years.⁶³ As the Court noted at trial, the term "occasional" with regard to the easement's use recognized Plaintiffs' properties could be flooded "more frequent[ly] in the future depending on meteorological conditions."⁶⁴ Dr. Bedient's work confirmed the Court's prescient use of the term.

⁶⁰ Tr. 1230:10-1231:06 (Bedient).

⁶¹ See Tr. 1279:2-3 ("Early on, everyone was calling this [Harvey] a 500- or thousand-year event."), 1282:12-14 ("And this is very, very similar to what came out after Tropical Storm Allison. I think they called Allison a 3,000-year event."); see also PX-JC 873, Bedient Report, at 7-13; Tr. 1236:16-1240:7, 1251:6-1257:25, 1258:6-1263:3 (Bedient). Of course, Harvey was a larger event than Allison, and it did not take another 3,000 years to occur; rather, it was closer to 16 years. And then, a mere two years later, Imelda struck.

⁶² Tr. 990:25-992:03 (Beddingfield testimony that expected frequency of structure flooding of Micu and Popovici homes are 20-50-year); 992:06-21 (20-50-year expected frequency for structure flooding of the Burnham, Holland, and Sidhu Unit 603 properties); Tr. 1286:23-1287:19 (Bedient testimony explaining differences between analyzing rainfall frequency and reservoir elevation frequency).

⁶³ PX-JC 873, Bedient Report, at 7-13; Tr. 1226:15-1228:10, 1230:21-1231:5, 1236:16-1240:7, 1251:6-1257:25, 1258:6-1263:3 (Bedient). As Mr. Mario Beddingfield, a hydraulic engineer with the Corps' Galveston district office, confirmed, the Corps is aware that rainfall intensities in the Houston area are increasing. Tr. 903:1-10, 949:13-17. Beddingfield similarly agreed that when reservoir pool elevation frequencies are determined using the graphical method previously employed by the Corps in its 2012 Water Control Manual, the frequency of Harvey reservoir pool elevations are between the 20-year and 100-year mark for Addicks and Barker. Tr. 985:17-986:09; 986:25-11; JX 1021-A (annotated version of Addicks Pool Elevation Frequency Chart); JX 1021-B (annotated version of Barker Pool Elevation Frequency Chart).

⁶⁴ Tr. 167:23-168:1. As Ms. Johnson-Muic, the top civilian authority over all real estate administered by the Corps and who served as the government's Rule 30(b)(6) designee on this issue, the Corps considers the term "occasional flooding" to mean anything less than having Plaintiffs' properties permanently underwater. 166:18-22, 167:3-7 (Johnson-Muic).

B. Mr. Robert Philo.

Based on his 40-plus years of experience working in the market for title insurance, Mr. Robert Philo provided insightful, and impactful, testimony regarding the effect of a permanent flowage easement on a property's chain of title—as well as its impact on the market participants necessary for the sale of that property.⁶⁵ Mr. Philo outlined the usual process by which a willing buyer and willing seller complete the transaction of a parcel of real property in Texas and how a flowage easement would disrupt the normal process.⁶⁶ Notably, the testimony went un rebutted by the government.

A key element of every standard real estate transaction is obtaining a title insurance policy. A title policy is an insurance contract issued by a title insurance company by which, for a one-time premium charge, the company will insure a specific condition of the land's title. If the insured party suffers a loss because the actual title to the subject property is not as described by the title insurance policy, the title insurance company must pay the insured party, up to the amount of the title insurance policy (which in sales transactions is usually the property's purchase price).⁶⁷

The company will issue a “title commitment” that states the terms under which the company is willing to ultimately issue a title insurance policy.⁶⁸ Prior to issuing a title commitment the company will search its title plant – an internal database containing all documents in the county's official land records that affect a particular tract of land.⁶⁹ Any issue or information discovered in the course of its

⁶⁵ Tr. 434:21-436:18 (Test. of Robert Philo). The Court accepted Mr. Philo as an expert witness “without reservation” regarding the field of title insurance and the recordation and effect of an easement through title search on title insurance, and the consequential effect on market participants. Tr. 459:22-460:11.

⁶⁶ PX-JC 898, Expert Report of Robert E. Philo, at 4; Tr. 473:21-476:19, 480:12-484:20 (Philo).

⁶⁷ PX-JC 898, at 11.

⁶⁸ PX-JC 898, at 6, 10-11.

⁶⁹ PX-JC 898, at 6; Tr. 465:24-466:3 (Philo).

search that could affect title to the property is noted and “excepted” from coverage under the policy.⁷⁰ Obtaining a “clean commitment” serves as a requirement for a traditional real estate market transaction.

But Mr. Philo explained that inclusion of a non-standard exception—like the permanent flowage easement—to the title commitment would preclude the issuance of a “clean commitment.”⁷¹ The failure to obtain a clean title commitment can have a ruinous impact on the transaction. First, the buyer is usually contractually allowed to cancel their purchase of the property if there is an issue concerning its title.⁷² More crippling, though, is the effect an “unclean” commitment has on the ability to finance the purchase.

In the typical real estate transaction, including the sale of single-family residential properties such as those at issue here, the buyer will finance most of the purchase price.⁷³ As Mr. Philo explained, lenders (especially those providing home mortgages) require the loans they make to meet certain standardized parameters so that those loans can be “packaged” together and sold on a secondary market.⁷⁴ As Mr. Philo explained, the inability to package and sell a mortgage in a secondary market means the lender would have to hold and service the loan “in-house,” which increases the risk that a lender will not issue a mortgage for the purchase.⁷⁵ Fundamentally, when a title policy fails to satisfy the “checklist” applied by lenders to ensure they can package and sell their loans, the economics of the purchase change by either driving up the cost to buyers or by preventing the financing of the sale

⁷⁰ PX-JC 898, at 7, 8; Tr. 466:3-24 (Philo).

⁷¹ PX-JC 898, at 12; Tr. 469:15-23 (Philo).

⁷² Tr. 468:20-469:9, 476:7-19 (Philo).

⁷³ PX-JC 898, at 12; Tr. 469:10-14 (Philo).

⁷⁴ PX-JC 898, at 12; Tr. 481:9-483:21 (Philo). Mr. Philo’s testimony on these issues was later echoed by that of Dr. Randall Bell with regard to the impact of a flowage easement on a transaction’s “TIM”: title, insurance, and mortgage. Tr. 1849:5-1850:19 (Test. of Dr. Randall Bell).

⁷⁵ Tr. 483:2-483:2, 484:17-20, 487:15-19 (Philo).

altogether.⁷⁶ The risk-averse nature of title insurers guarantees that they will take an exception to the permanent flowage easement in any policy commitment they issue, thereby triggering the multiple detrimental effects on future sales of the subject properties.⁷⁷

As Mr. Philo testified, once a document evidencing the permanent flowage easement is recorded in the county deed records, whether that be an easement document negotiated between the property owner and the United States or the judgment of this Court setting forth the fact and terms of this “atypical” permanent flowage easement, “it will be picked up and known within a day or two of it being recorded.”⁷⁸ And, without doubt, the easement will be recorded when finalized.⁷⁹

According to Mr. Philo, the title insurance industry is not yet aware of the Court’s determination that the United States has taken a permanent flowage easement over the Test properties: if they were, the title insurers “would be petitioning the state board of insurance to change the promulgated insurance form to automatically take exception in some way, fashion, or form to this

⁷⁶ Tr. 485:3-489:16 (Philo) (noting that failure to obtain financing would relegate the property to a market niche (and a purchase price) where the buyer can pay cash). This market impact was confirmed by Dr. Bell’s testimony and his description of properties selling for “pennies on the dollar” because they were subject to a detrimental condition like the permanent flowage easement taken by the government. Tr. 1851:22-1853:6 (Bell).

⁷⁷ Tr. 463:25-465:14, 470:15-471:23, 481:5-8 (Philo).

⁷⁸ See Tr. 462:24-463:1 (Philo).

⁷⁹ See Tr. 153:21-154:2, 158:10-12, Tr. 197:10-11, 225:21-226:3, 256:17-259:24 (Johnson-Muic) (describing the various steps to obtain a document for filing in the county deed records which Corps policy requires be recorded so that the Corps can “give notice to the world” of the interest it holds and thereafter prevent encroachments on its easement). See also 264:12-14 (“Q. The corps policy call for recordation, correct? A. Yes.”) (Johnson-Muic); Tr. 351:16-352:15 (Test. of Timothy Nelson, Chief of the Real Estate section of the Corps’ Galveston Division and the person who will be charged with the direct responsibility of administering the easement at issue, that he is unaware of anything that will exempt the permanent flowage easement taken by the United States from the Corps’ policies to survey, physically mark the boundaries of, and record in the county real property records each real property interest it administers). And as Ms. Johnson-Muic confirmed, regardless of any uncertainty as to the parameters of the permanent flowage easement, the Corps policies as to the enforcement of the easement will apply to the interest taken here. Tr. 215:6-17, 220:20-22, 250:17-21.

easement.”⁸⁰ In his experience, the title insurance industry is a “very close-knit family,” comprised of only three or four groups of insurers who issue 90% or more of all the title policies in the United States.⁸¹ The facts that there has been no such turmoil in the Texas title insurance industry, nor have title insurance companies ceased doing business in Harris and Fort Bend Counties until they can put an exception into every policy they have written for the area, confirm Mr. Philo’s opinion that the title insurance companies are not yet aware of the Court’s determination that a permanent flowage easement has been taken over the Test properties.⁸² Once a document evidencing the permanent flowage easement is filed in the Harris and Fort Bend County deed records for the Test Properties, the effect on their marketability, and fair market value, will be calamitous.⁸³

C. Dr. Randall Bell.

This Court accepted Dr. Randall Bell as an expert in real estate damage and economics and real estate valuation during the liability trial in this action. 146 Fed. Cl. at 245. At the just compensation trial, Dr. Bell provided expert testimony on the impact of a “detrimental condition” on the valuation

⁸⁰ Tr. 494:5-10 (Philo). Mr. Philo’s testimony on this point came from his extensive experience as a participant in the title insurance industry itself, his service regulating the title insurance industry from 1981-84 for the Texas Department of Insurance, and from his membership and participation in the Texas Land Title Association – an organization of about 5,000 members that gathers and shares information about title insurance in the state and frequently interacts with the Texas Department of Insurance. Tr. 439:17-430:18, 436:3-8.

⁸¹ Tr. 493:5-10 (Philo).

⁸² Tr. 462:20-464:10, 491:23-492:25 (Philo). Indeed, because of his concern about the impact on the market and his execution of a confidentially agreement, Mr. Philo took no steps in his research for this assignment that “could possibly lead to someone doing some checking to find out what was going on in this case.” Tr. 458:1-3 (Philo); *see also* 463:13-24 (Philo).

⁸³ Mr. Philo’s opinions are further confirmed by others, namely the attempted *Amici* who argued that the flowage easements’ severe impact on property values would seriously undermine local governmental funding. ECF 498-1, at 19–27 (motion denied by ECF 520).

of a piece of real property—including both flooding and, independently and distinctly, the existence of a permanent flowage easement on the property.⁸⁴

As Dr. Bell noted, the objective when valuing just compensation for a taking is to value the rights taken from the fee simple property owner.⁸⁵ In determining that value for this case, Dr. Bell followed the methodology and requirements of the Uniform Appraisal Standards for Federal Land Acquisitions, commonly known as the “Yellow Book.”⁸⁶ That methodology is known as the “Before and After” approach where an appraiser determines a value of the property “Before” in an unimpaired condition, and then determines a value of the property as it sits in the condition it is left immediately “After” the taking.⁸⁷

Per Dr. Bell, the rights taken by a permanent flowage easement “allows the government to inundate the property not on a permanent basis in terms of a lake, but on a periodic basis, which basically is something—means something less than permanent.”⁸⁸ But that somewhat sterile academic

⁸⁴ Tr. 1822:9-1823:4 (discussing detrimental conditions), 1832:10-1833:5 (explaining significantly different impacts to valuation from a property having been flooded as opposed to the imposition of a permanent flowage easement) (Test. of Dr. Randall Bell). In addition to the qualifications upon which the Court previously accepted Dr. Bell, he testified that he is a long time Member of the Appraisal Institute (“MAI”) and the International Right of Way Association (“IRWA”), and he has appraised every type of property interest owned by the Test Plaintiffs. Tr. 1821:13-1823:20 (Bell).

⁸⁵ Tr. 1823:21-1824:6 (Bell).

⁸⁶ Tr. 1824:7-16, 1827:9-13 (Bell). As Dr. Bell testified, he is actually qualified to teach the course on how to perform a Yellow Book appraisal, though he has never done so. Tr. 1824:22-1825:4 (Bell).

⁸⁷ Tr. 1827:3-1829:20 (Bell).

⁸⁸ Tr. 1829:24-1830:5 (Bell). Dr. Bell’s description of the rights taken, and the effect of the taking, echo the description provided by both Ms. Johnson-Muic and this Court. *See* Tr. 166:15-22, 167:6-7 (Johnson-Muic); *Caquelin v. United States*, 140 Fed. Cl. 564, 574 (2018) (“By physically, and permanently, taking a part of property, the government [did] not simply take a single strand from the bundle of property rights: it chopped through the bundle, taking a slice of every strand, effectively destroying each of these rights.” (cleaned up) (quoting *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 435 (1982))); *see also Cedar Point Nursey v. Hassid*, 141 S. Ct. 2063, 2072 (2021) (“The right to exclude is “one of the most treasured” rights of property ownership. According to Blackstone, the very idea of property entails “that sole and despotic dominion which one man claims and exercises over the external things of the world, in total exclusion of the right of any other individual in the universe.” In less exuberant terms, we have stated that the right to exclude is “universally held to be a fundamental

description masks a devastating severance of the owner's bundle of rights—specifically, the taking of the sacred right to exclude others from their property:

[The flowage easement] severs the bundle of rights. The bundle of rights is the right to enjoy and the right to occupy. And so an easement goes onto title reports, and it is the right to occupy – instead of saying I can – I and my family and whoever we choose to have in the house can occupy our house, and choose who occupies it, . . . you now share occupancy with the government, who can also occupy the interior of that house, meaning literally living rooms, kids' bedrooms, kitchens, dining rooms, with water on a periodic basis when they choose to do it.⁸⁹

Dr. Bell considered using all three of the common approaches to valuation—the cost, income, and sales comparable approaches—but for various reasons none could be employed to value the property in the After condition.⁹⁰ Instead, Dr. Bell utilized a five-step analysis to determine the property value of each Test Property in its After condition and over which the permanent flowage easement is imposed.⁹¹ And as Dr. Bell testified, the fact that human habitation will still be permitted on the Test Properties subject to the easement does indeed makes it “atypical,” but in a negative sense.⁹² Case studies show that the presence of a flowage easement on a property title report triggers such scrutiny by insurers and lenders that neither will facilitate a purchase of the property, leaving only those buyers who can pay cash as market participants—and severely diminishes the property's market value.⁹³ Dr. Bell ultimately concluded that the government's taking will decrease each property's value by 85 to 100 percent.⁹⁴

element of the property right,” and is “one of the most essential sticks in the bundle of rights that are commonly characterized as property.”) (citations omitted).

⁸⁹ Tr. 1830:11-22 (Bell).

⁹⁰ Tr. 1826:20-1827:2, 1831:12-191898:23-1899:3 (Bell); PX-JC 897 (Bell Report), at 99-100 (explaining examination and reasons for rejection of three common approaches to valuation).

⁹¹ Tr. 1833:6-1834:9.

⁹² Tr. 1856:14-19, 1891:3-10 (Bell).

⁹³ Tr. 1849:5-1853:12 (Bell).

⁹⁴ Tr. 1847:6-11 (Bell); PX-JC 897, at 139-40.

D. Mr. Matthew Deal.

Mr. Matthew Deal likewise valued the residential properties owned by each Test Plaintiff in both the Before and After scenario. Mr. Deal is a Texas state certified appraiser with his practice located on the west side of Houston, holds the CRE designation as member of the Counselors of Real Estate, and is also a member of the IRWA.⁹⁵ Mr. Deal has been appraising properties in Texas and elsewhere for over thirty years; he has appraised property interests for condemnation actions, including easements, on behalf of both property owners and governmental entities, including several prominent assignments in the greater Houston market area.⁹⁶ Mr. Deal was previously accepted as an expert by the Court in real estate market studies and real estate valuation during the liability trial. 146 Fed. Cl. at 245.

At the just compensation trial, Mr. Deal's qualification to testify as an expert on the topics of real estate appraisal, real estate valuation, and real estate market studies was unchallenged, and his reports were admitted into the record.⁹⁷ In his testimony, Mr. Deal expounded on his report admitted during the liability proceeding that Plaintiffs' properties which "were inundated by flood waters suffered significant and immediate impairment that resulted in precipitous price reductions after flood waters had receded." 146 Fed. Cl. at 245 (quoting PX 2205). In presenting his just compensation analysis, Mr. Deal employed the Before and After methodology,⁹⁸ using a sales comparison approach to reach his Before values.⁹⁹ And as explained in his appraisals and during his testimony, in the After

⁹⁵ Tr. 1412:2-9 (Test. of Matthew Deal).

⁹⁶ Tr. 1411:5-19 (Deal).

⁹⁷ Tr. 1421:01-24 (Deal); Tr. 1706:1-24 (admitting PX-JC 886, 887, 888, 889, 890, & 891).

⁹⁸ PX-JC 156, at 152 ("As recognized by the federal courts, proper application of the before and after method will result in a figure that reflects the value of the land actually acquired as well as any compensable damages and direct and special benefits to the remainder property."); Tr. 1471:11-1472:19 (Deal).

⁹⁹ Tr. 1430:13-1431:04 (Deal).

scenario Mr. Deal used generally accepted appraisal methodologies to quantify the retrospective value of the property rights remaining to the Test Properties—as expressed by the Court in its rulings¹⁰⁰—after the government’s taking of the permanent flowage easement via physical occupation with contaminated floodwaters.¹⁰¹ This included conducting a paired sales analysis to identify, isolate, and quantify the retrospective value of each of the Test Properties he appraised as burdened by the government’s permanent right to occasionally induce flooding as part of its operation of the project.¹⁰² Mr. Deal found a diminution in value ranging from 75-82% for Test Properties which experienced structural flooding in their “as is” After condition immediately following the flooding. Mr. Deal also estimated the temporary loss of use of the properties by performing an income analysis of rental loss associated with how long the properties could not be used.¹⁰³

E. Mr. Tim Archibald.

Mr. James Timothy (Tim) Archibald provided reports assessing Before and After valuations, as well as a market rental value, for each of the single-family residential Test Properties and a valuation of the leasehold taken from Plaintiff Scott Holland.¹⁰⁴ Mr. Archibald has a B.B.A. in finance and marketing from Baylor University, is a Texas state-certified general real estate appraiser, an MAI, and has significant experience appraising the types of properties owned by the Test Plaintiffs.¹⁰⁵ In fact, Mr. Archibald’s experience includes the valuation of a property subject to a partial flowage easement;

¹⁰⁰ Tr. 1415:14-1416:13 (Deal).

¹⁰¹ Tr. 1451:14-24; 1453:11-21; 1454:07-23; 1470:03-20; 1470:23-1472:19 (Deal); PX-JC 156, at 170 (Yellow Book quote of *U.S. ex rel. Tenn. Valley Auth. v. Indian Creek Marble Co.*, 40 F. Supp. 811, 821 (E.D. Tenn. 1941) (explaining overall rationale for valuing the market value of the remainder property after imposition of easement).

¹⁰² Tr. 1417:5-10; 1454:11-21; 1469:09-19; 1482:05-25; 1512:04-22; 1515:02-1518:08 (Deal).

¹⁰³ Tr. 1415:1-13 (Deal).

¹⁰⁴ PX-JC 877, 878, 880, 881, 882, 883, & 884; Tr. 2011:12-2013:16 (admitting same).

¹⁰⁵ Tr. 1905:5-10, 1906:6-1907:25 (Test. of Tim Archibald).

and he is the only expert in this case with any such experience.¹⁰⁶ Mr. Archibald has previously been accepted as an expert in real estate appraisal and real estate valuation and, after a lengthy *voir dire*, was accepted as an expert on those topics in this case.¹⁰⁷

Mr. Archibald used the methodology and standards set forth in both the Uniform Standards of Professional Appraisal Practice (“USPAP”) and the Yellow Book to determine a Before value of each Test Property using a comparable sales analysis based on putting the property to its highest and best use, as well as a rental value for the properties subjected to a temporary but total deprivation of use.¹⁰⁸ He then estimated the diminution in market value of each in the After scenario, and he did so by assessing the Test Properties in an uncured condition—to capture the value of the property right acquired as well as compensable damages to the remainder properties. *See* YELLOW BOOK § 1.7.1, at 37.¹⁰⁹ Ultimately, Mr. Archibald determined that in the After scenario the government’s taking caused a diminution in the fair market value of the single family home properties which experienced structural flooding in a range between 85-95%.¹¹⁰ Mr. Archibald assessed a 99% decrease for Mr. Sidhu’s downstairs condominium unit which the government flooded and had to be repaired (even though it was uneconomical to do so), a 51% diminution for Mr. Sidhu’s upstairs unit and Ms. Popovici’s residence since they were not physically inundated during the taking, and the amount of the leasehold advantage Mr. Holland enjoyed that was taken by the government.¹¹¹

¹⁰⁶ Tr. 1908:1-16, 1918:11-22 (Archibald).

¹⁰⁷ Tr. 1908:17-1909:9, 1912:7-1941:8 (Archibald).

¹⁰⁸ Tr. 1910:7-13, 1911:1-22, 1950:2-13, 1966:14-20 (Archibald).

¹⁰⁹ In his work, Mr. Archibald, relied on the independent expert work and opinions of both the De Facto Consulting Group and Matison Construction Estimating when considering the cost to repair each of the remainder properties. *See, e.g.*, Tr. 1955:9-1956:13 (Archibald).

¹¹⁰ Tr. 1964:6-10 (Archibald).

¹¹¹ Tr. 1947:23-1949:14, 1954:17-1955:8 (Archibald).

F. Mr. Timothy Lozos.

Mr. Timothy Lozos, a cost estimating consultant, testified regarding the depreciation of Plaintiffs' personal property losses as well as the cost to repair the flooded real property structures.¹¹² Mr. Lozos has over 25 years of experience in construction estimating and over 15 years of experience working with insurers in assessing the depreciated value of personal property.¹¹³ His qualification to testify as an expert on these topics was unchallenged and his reports were admitted into the record.¹¹⁴

Mr. Lozos' company, De Facto Consulting, prepared reports for each of the Test Properties claiming losses due to structural flooding.¹¹⁵ In so doing, Mr. Lozos used the scope of work and quantity of materials identified in the expert reports of the government's experts, Madsen, Kneppers & Associates (MKA), who were accepted during the liability phase of the case as experts in preparing scopes for work for property damaged by water.¹¹⁶ He utilized the government's dimensional information of each Test Property,¹¹⁷ and applied industry-accepted methods and resources to determine the cost to remediate and repair each property after the taking.¹¹⁸ In preparing his analyses to determine the depreciated value of the personal property items reported by each Plaintiff as lost because of the taking, Mr. Lozos used standard industry estimating guides, primarily the Joint Military Industrial Depreciation Guide.¹¹⁹ While the government tried to minimize Plaintiffs' losses, Mr. Lozos

¹¹² Tr. 1773:14-1774:2, 1781:18-1795:14 (Test. of Timothy Lozos).

¹¹³ Tr. 1774:5-10 (Lozos).

¹¹⁴ Tr. 1775:11-1776:6 (Lozos); PX-JC 867, 1113-16.

¹¹⁵ PX-JC 1113-16.

¹¹⁶ Liability Tr. 2901:05-07 (Hooper); Liability trial exhibits DX 602 (Burnham), 604 (Micu), and 605 (Sidhu Unit 603).

¹¹⁷ Tr. 1785:20-1786:16 (Lozos testimony regarding his use of price list specific to Test Property zip codes for relevant time period); 1817:21-1818:06 (Lozos).

¹¹⁸ Tr. 1782:2-1783:16, 1785:20-1789:19 (Lozos).

¹¹⁹ See Tr. 1778:8-23 (Lozos); see also PX-JC 867.

used the best information available which satisfies the proof required by the law of this Circuit. *Banks*, 721 Fed. App'x at 940.

G. Dr. Ray Perryman.

Finally, Dr. Ray Perryman was accepted as an expert in the areas of interest rates, investments, rates of return, and valuations, and specifically with regard to the appropriate interest rate and compounding period to be applied to any compensation awarded in this case, a role he has undertaken many times before.¹²⁰ Dr. Perryman is eminently qualified to provide such testimony having a Bachelor's degree in math from Baylor University and a Ph.D. in economics from Rice University, where he wrote his dissertation on U.S. Monetary policy, models of interest rates, and how the monetary aspect of the national economy works.¹²¹ Over his career Dr. Perryman has taught at Baylor, Rice, the University of Texas, Southern Methodist University, and the International Institute for Advanced Studies.¹²² Finally, Dr. Perryman has authored an extensive array of books and academic papers, many of which directly involve the issues about which he testified.¹²³

Dr. Perryman opined that the appropriate interest rate to be applied to any award of just compensation in this case is the Aaa Corporate Bond Rate of 3.62 percent as set by Moody's Investment Services on August 30, 2017 (the date of take), compounded quarterly.¹²⁴ Dr. Perryman explained the rationale behind his opinions was based on an application of the "prudent investor rule," and was designed to compensate each Plaintiff for their having not received their just compensation

¹²⁰ Tr. 1756:14-1757:13, 1755:8-16 (Test. of M. Ray Perryman).

¹²¹ Tr. 1753:9-23 (Perryman).

¹²² Tr. 1754:1-14 (Perryman).

¹²³ Tr. 1754:15-1755:7 (Perryman).

¹²⁴ Tr. 1757:8-17, 1767:8-22 (Perryman); *see also* PX-JC 872, at 8 (Perryman report), admitted at Tr. 1771:16.

as of the date of taking, assessing the appropriate balance of risk and return.¹²⁵ Dr. Perryman’s analysis was done on an objective basis, and his selection of the Moody’s rate took into account independent issues such as inflation and its impact on an individual’s purchasing power as well as liquidity risk to the Plaintiffs. His selection of a quarterly compounding term was also designed to put each Plaintiff in as good a position they would have enjoyed had they received their compensation at the time their property was taken.¹²⁶

III. Each Plaintiff Should Receive a Substantial Award of Just Compensation.

“[F]or all that the Government takes it must pay.” *United States v. Dickinson*, 331 U.S. 745, 750 (1947); *see also Cedar Point Nursey v. Hassid*, 141 S. Ct. 2063, 2071 (2021) (stating that physical appropriations of private property “say, by recurring flooding as a result of building a dam, constitute the clearest sort of taking, and we assess them using a simple, *per se* rule: The government must pay for what it takes.”) (citations omitted). This Court has found the government physically took a permanent, non-categorical flowage easement over each Test Property and, in doing so, also took Plaintiffs’ personal property, fixtures, and improvements along with the use and enjoyment of the properties for an extended period. 146 Fed. Cl. at 251-52. By “physically, and permanently, taking a part of property, the government [did] not simply take a single strand from the bundle of property rights: it chopped through the bundle, taking a slice of every strand, effectively destroying each of these rights.” *Caquelin*, 140 Fed. Cl. at 574 (cleaned up) (quoting *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 435 (1982)). The government’s taking “also encompassed—as a consequential result of the flowage easement taken—plaintiffs’ personal property, fixtures, and improvements damaged or destroyed by the flood event that climaxed on August 30, 2017.” *In re Upstream Addicks & Barker (Texas) Flood Control Reservoirs*, 148 Fed. Cl. 274, 278 (2020). As a result of this taking, there

¹²⁵ Tr. 1755:17-1756:12, 1759:6-1760:5 (Perryman).

¹²⁶ Tr. 1760:6-1762:22, 1767:12-1769:1 (Perryman).

exists a “clear and categorical obligation” that the United States pay just compensation sufficient to put each Plaintiff “in as good a position pecuniarily as if his property had not been taken.” *Olson v. United States*, 292 U.S. 246, 255 (1934); *Cedar Point Nursey*, 141 S. Ct. at 2071.

There is no formula or set of “inexorable rules” by which this Court must mechanically assess the injuries each Plaintiff suffered for the government’s taking. *Georgia-Pacific Corp. v. United States*, 640 F.2d 328, 336 (Ct. Cl. 1980). The constitutional mandate of just compensation requires this Court perform an “ad hoc, factual inquiry” which “derives as much content from the basic equitable principles of fairness as it does from technical concepts of property law.” *Kaiser Aetna v. United States*, 444 U.S. 164, 175 (1979); *United States v. Fuller*, 409 U.S. 488, 490 (1973); *Foster v. United States*, 2 Ct. Cl. 426, 446 (1983) (noting that just compensation “invokes the equitable powers of the court and there is wide latitude of judicial discretion to include or exclude particular elements of damage”). And, given the Plaintiffs’ inability to recover for the momentous disruption and serious hedonic damages they suffered, equity demands that the Court reject the government’s attempts to minimize the disaster it knowingly caused these individuals. *McNeil v. United States*, No. 11-386, 2011 WL 4908430, at *2 (Fed. Cl. Oct. 13, 2011), *aff’d*, 476 F. App’x 250 (Fed. Cir. 2012).

A. Just Compensation Due for the Taking of a Permanent Flowage Easement.

A permanent taking requires the government to pay the property owner the market value of the property rights taken at the time of the taking; that is, “what a willing buyer would pay in cash to a willing seller at the time of the taking.” *United States v. 564.54 Acres of Land*, 441 U.S. 506, 511 (1979) (quoting *United States v. Miller*, 317 U.S. 369, 374 (1943)). The market value of an easement is assessed using the “before-and-after” method, i.e., “the difference between the value of the property before and after the Government’s easement was imposed.” *United States v. Va. Elec. & Power Co.*, 365 U.S. 624, 632 (1961). The Yellow Book—which the government should have followed—endorses this methodology. YELLOW BOOK § 1.2.7.3.4, at 17.

Within the three-dimensional space encompassed by the reservoir pools at their highest level on August 30, 2017, *viz.*, 109.1 feet in Addicks and 101.6 feet in Barker, “the government took a permanent flowage easement, leaving plaintiffs a fee simple interest in their properties which allows them to continue their lawful use subject to the risk of occasional flooding caused by the operation of the Addicks and Barker Dams.” 146 Fed. Cl. at 278. The rights taken must be assessed pursuant to controlling Texas law, which requires an award of just compensation that assumes a maximum use of the easement by the government, causing the maximum injury from that use to the Plaintiffs. *See Preseault v. United States*, 100 F.3d 1525, 1544 (Fed. Cir. 1996) (state property law controls interpretation of easement); *City of Pearland v. Alexander*, 483 S.W.2d 244, 247 (Tex. 1972) (a condemnee “is entitled to consideration of the damage which the condemnor has a right to inflict” (emphasis added)). Texas law leaves no doubt about the scope and impact of the easement rights to be considered when assessing their effect on property values:

It is settled law in this state that the probability that the condemnor will not exercise, or has no present intention of exercising, the full rights acquired under condemnation may not be considered in reduction of damages, where, as in this case, there is nothing to prevent the condemnor from using to the full extent its rights. The law presumes the condemnor will exercise its rights and will use and enjoy the property taken to the extent of its acquisition.

Horton v. Mills Cty., 468 S.W.2d 876, 878 (Tex. Civ. App.—Austin 1971, no writ) (emphasis added). *See also Columbia Gas Transmission, LLC v. An Easement To Construct, Operate, & Maintain a 20 Inch Gas Transmission Pipeline Across Properties in Washington Cty., Pa. By Quarture*, 745 F. App’x 446, 451 (3d Cir. 2018) (directing that, when determining just compensation a court “must assume the use of the easement will be in a manner as injurious to the landowners’ remaining rights in the property as the easement rights taken will lawfully permit” (cleaned up)).

Under Texas law, the flowage easement taken provides the government a perpetual, unrestricted right to store floodwaters in the three-dimensional area encompassed by the easement and, concomitantly, deprives the property owner of their rights of exclusive use and occupation as

well as prohibiting interference by the property owner with the government's use of the easement. *See Severance v. Patterson*, 370 S.W.3d 705, 721 (Tex. 2012) (“Because the easement holder is the dominant estate owner and the land burdened by the easement is the servient estate, the property owner may not interfere with the easement holder’s right to use the servient estate for the purposes of the easement.”); *see Marcus Cable Assocs., L.P. v. Krohn*, 90 S.W.3d 697, 700 (Tex. 2002) (explaining that an easement relinquishes a property owner’s right to exclude) (citations omitted).

As Ms. Johnson-Muic testified, the Corps must administer the Project in accordance with its congressionally authorized purpose to protect downstream Houston and the Houston Ship Channel, which means storage of the water detained by the Addicks and Barker dams as needed on private properties subject to the easement.¹²⁷ *See* 146 Fed. Cl. at 230, 253-54. Mr. Nelson, Chief of the Real Estate section of the Corps’ Galveston Division, confirmed that the government will be able to exercise the rights provided by the easement without any restriction by the fee owner.¹²⁸ And predictions with regard to the amount of use by the government do not diminish the right taken.¹²⁹ This is particularly true given the amount of uncertainty that exists about how often and when the government will enforce its easement rights in the future.¹³⁰ It is this right—the unrestricted right to store water for as long as is necessary on Plaintiffs’ private property within the easement area—that the government took by flooding and for which it must compensate Plaintiffs; the only compensation these Plaintiffs will ever get, even as the government continues to flood them in the future whenever it exercises its rights under this easement.

¹²⁷ Tr. 181:4-184:25 (Johnson-Muic); *see also* Tr. 1192:5-13 (Test. of Robert Thomas, confirming there has been no change in the project purpose or operations and that if there were a storm today “that generated enough runoff to get the reservoir pools above government-owned land,” the Corps’ operating policy would still be to flood Upstream properties to protect downstream Houston).

¹²⁸ Tr. 308:24-309:5, 343:23-344:7 (Nelson).

¹²⁹ Tr. 349:19-21 (Nelson).

¹³⁰ Tr. 432:10-16 (Nelson).

Plaintiffs' experts applied the Before and After methodology to reach a range of compensation owed for the taking of a permanent flowage easement over their properties. For the **Before** scenario, Matthew Deal and Tim Archibald each valued the fee simple estate of the Banker, Burnham, Micu, and Popovici single family residential properties using the sales comparison approach. Deal and Archibald used both an income and a comparable sales approach to determine the Before values of Plaintiff Sidhu's condominium units. And Mr. Archibald appraised the value of the leasehold interest taken from Scott Holland based on an analysis of comparable home rentals.

For the **After** scenario, each property must be valued as put to its highest and best use in the condition a willing buyer would have found it just after the Harvey flood waters had receded: severely damaged and now forever stripped of the owner's right to exclude future project-induced floodwater incursions onto their land and, depending on the easement area, into their homes. *See 8.41 Acres of Land*, 680 F.2d at 392; *In re Upstream*, 146 Fed. Cl. at 253; *see also* YELLOW BOOK § 1.2.7.3.4, at 17. Dr. Bell described the After condition of a residential property as one in which he is "standing in the living room with the water up to my knees or soggy carpet with the destroyed drywall and cabinetry and so on and so forth. It's as if you're putting a for sale sign on that property in that destructive condition."¹³¹

Assessing the After scenario using the Yellow Book approach, Dr. Bell opined to a decrease of between 85-100% and Mr. Archibald testified to an 85-95% diminution in market value based on the ultimate language defining the atypical easement at issue in this case. Applying an additive approach, Mr. Deal testified to an average decrease in value of between 75-82% for properties with structure flooding. Those ranges are in accord with that of the Corps' top appraiser in the Galveston Division, Mr. Thomas Seymour, whose cost estimate prepared as part of a post-Harvey Addicks and Barker Potential Expansion (PX-JC 262) resulted in a finding that the cost of buying a flowage

¹³¹ Tr. 1829:15-20 (Bell).

easement over the Harvey pool properties is above 90% of the property's fee simple value.¹³² Similarly, as Ms. Popovici testified, during a virtual public meeting held by the Army Corps of Engineers “to explain the results of their feasibility report,”¹³³ a “gentleman in uniform” admitted that the Corps estimated the subject flowage easement taken by the government here diminishes a property's value by some 90%.¹³⁴ All of these value estimates—whether Plaintiffs' experts or Corps' opinions made outside the courtroom—reflect and support each other.

The opinions of Plaintiffs' experts provide amounts due each Test Property Plaintiff for the permanent flowage easement taken. Dr. Bell's opinion that the imposition of a permanent flowage easement on residential property (even one which permits continued human habitation) diminishes the property's value in the range of -85% to -100% yields the following results when applied to the Before values for the Test Properties as determined by Mr. Deal and Mr. Archibald:

	Value Before per Archibald	Value After (85% loss)	<i>Minimum</i> Compensation Due
Banker	\$560,000	\$84,000	\$476,000
Burnham	\$180,000	\$27,000	\$153,000
Micu	\$270,000	\$40,500	\$229,500
Popovici	\$655,000	\$131,000	\$524,000
Sidhu Unit 603	\$54,000	\$8,100	\$45,900
	Value Before per Deal	Value After (85% loss)	<i>Minimum</i> Compensation Due
Banker	\$530,000	\$79,500	\$450,500
Burnham	\$180,000	\$27,000	\$153,000
Micu	\$290,000	\$43,500	\$246,500
Popovici	\$625,000	\$328,000 ¹³⁵	\$297,000
Sidhu Unit 603	\$50,500	\$7,575	\$42,925

¹³² Tr. 333:19-334:17, 425:17-20 (Test. of Timothy Nelson); 2654:6-35 (Test. of Thomas Seymour).

¹³³ Tr. 808:22-809:24 (Popovici).

¹³⁴ Tr. 810:4-811:14 (Popovici).

¹³⁵ Based on the survey by Plaintiffs' expert Neil Atkinson, the government's flowage easement burdens 55.9% of the Popovici property. *See* Tr. 1969:8-15; PX-JC 882, at 34; PX-JC 889, at 43. Dr. Bell's percentage diminution is applied only to that area. The resulting figures have been rounded.

Mr. Deal determined similar compensation figures using the methodology outlined above:

Plaintiff	Value Before	Value After	Difference
Banker ¹³⁶	\$530,000	\$181,000	\$349,000
Burnham ¹³⁷	\$180,000	\$17,000	\$163,000
Micu ¹³⁸	\$290,000	\$68,000	\$222,000
Popovici ¹³⁹	\$625,000	\$516,250	\$108,750
Sidhu Unit 603 ¹⁴⁰	\$50,500	\$3,156	\$47,344
Sidhu Unit 604 ¹⁴¹	\$50,500	\$41,900	\$8,600

Mr. Archibald provided his (comparable) opinions of the decrease in market value of the Test Property Plaintiffs' residential properties caused by the flowage easement:

Plaintiff	Value Before	Value After		Difference	
Banker ¹⁴²	\$560,000	\$84,000 (85% decrease)	\$28,000 (95% decrease)	\$476,000 (85% decrease)	\$532,000 (95% decrease)
Burnham ¹⁴³	\$180,000	\$27,000 (85% decrease)	\$9,000 (95% decrease)	\$153,000 (85% decrease)	\$171,000 (95% decrease)
Micu ¹⁴⁴	\$270,000	\$40,500 (85% decrease)	\$13,500 (95% decrease)	\$229,500 (85% decrease)	\$256,500 (95% decrease)
Popovici ¹⁴⁵	\$655,000	\$321,000 (51% decrease)		\$334,000	

	Value Before	Value After	Difference
Sidhu 603 ¹⁴⁶	Income approach \$54,000	\$540	\$53,460
	Comparable sales approach \$53,000	\$530	\$52,470

¹³⁶ PX-JC 886.

¹³⁷ PX-JC 887.

¹³⁸ PX-JC 888.

¹³⁹ PX-JC 889.

¹⁴⁰ PX-JC 890.

¹⁴¹ PX-JC 891.

¹⁴² PX-JC 877.

¹⁴³ PX-JC 878.

¹⁴⁴ PX-JC 881.

¹⁴⁵ PX-JC 882.

¹⁴⁶ PX-JC 883.

Sidhu 604 ¹⁴⁷	Income approach \$54,000	\$26,500	\$27,500
	Comparable sales approach \$53,000	\$26,000	\$27,000

Mr. Archibald also determined that Mr. Holland suffered a \$3,300 loss when the leasehold advantage he enjoyed was taken by the government.¹⁴⁸

B. Just Compensation Due for Plaintiffs' Temporary Lost Use of Real Property.

The second aspect of the government's taking its permanent flowage easement was that each Plaintiff was temporarily dispossessed of, and completely precluded from any access to and/or use of, their real property and the improvements thereon. 146 Fed. Cl. at 247. In his report, Dr. Bell explained this aspect of the rights the government took:

When the bundle of rights is impacted, property owners or occupants no longer enjoy the normal and conventional use of their property.

During periods of relocation, evacuation, disaster, and detrimental conditions, property owners typically cannot exercise the conventional use of their real property, regardless of their willingness to relocate or remain in place. Therefore, as a result of Hurricane Harvey flooding and the imposition of a flowage easement, property owners or occupants lost the conventional use of their real properties.

Those who relocate do not use and enjoy their properties because they live elsewhere as a result of the detrimental condition, in this case the Hurricane Harvey flooding. Those that remain in place during an evacuation typically enter a type of "survival mode," bunkering down in their homes given the uncertainty of the detrimental condition. This is not a conventional use of the property, and therefore the property suffers from a use effect.¹⁴⁹

The temporary loss to Plaintiffs of the "normal use and enjoyment" of their properties must also be compensated and is measured by the fair rental value of the property for the period of the taking. *See Yuba Nat. Res., Inc. v. United States*, 904 F.2d 1577, 1580 (Fed. Cir. 1990). Plaintiffs' experts provided the following opinions of the compensation due for the temporary loss of property rights:

¹⁴⁷ PX-JC 884.

¹⁴⁸ PX-JC 880.

¹⁴⁹ PX-JC 897 at 64.

Plaintiff	Monthly Rental Value		Duration
	Per Deal	Per Archibald	
Banker	\$3,000	\$3,300	8 months
Burnham	\$1,500	\$1,700	7-8 months
Micu	\$1,875	\$1,900	12 months
Popovici	\$5,000	\$4,500	-
Sidhu Unit 603 ¹⁵⁰	\$675	\$653	10–12 months

With respect to the duration, each Plaintiff provided testimony on the length of time it took them to repair their Test Property in the context of a market where contractors were in high demand and materials were scarce.¹⁵¹ Using a period of 10 months as a reasonable period to repair,¹⁵² the just compensation due for the government’s temporary takings would be as follows:

Plaintiff	Just Compensation Due for Lost Use	
	per Matthew Deal	per Tim Archibald
Banker	\$30,000	\$33,000
Burnham	\$15,000	\$17,000
Micu	\$18,750	\$19,000
Popovici	\$50,000	\$45,000
Sidhu Unit 603	\$6,750	\$6,530

C. Just Compensation Due for the Taking of Plaintiffs’ Personal Property.

The government’s taking of property by flooding also took Plaintiffs’ rights of use, enjoyment, and alienability in their personal property, for which just compensation must be paid. *See* 146 Fed. Cl. at 247; *see also Horne v. Dep’t of Agric.*, 576 U.S. 350, 358 (2015) (“Nothing in the text or history of the Takings Clause, or our precedents, suggests that the rule is any different when it comes to appropriation of personal property. The Government has a categorical duty to pay just compensation when it takes your car, just as when it takes your home.”); *Karuk Tribe of Cal. v. Ammon*, 209 F.3d 1366,

¹⁵⁰ As Mr. Sidhu testified, his upstairs unit, No. 604, did not suffer a loss of tenancy due to the taking. Tr. 1714:18-21.

¹⁵¹ Tr. 105:17-20 (Micu – 12 months); 763:8-10 (Banker – 8 months); 1726:10-13 (Sidhu – 10 to 11 months). Ms. Burnham was never able to repair and move back into her Test Property.

¹⁵² Tr. 58:07-59:02 (Burnham) (Ms. Burnham did not repair the Four Seasons home and testified that the period of displacement was from August 25, 2017, through April 14, 2018).

1374 (Fed. Cir. 2000) (“the term property as used in the Taking Clause includes all rights inhering in ownership, including the right to possess, use, and dispose of the property”); *In re Sun Coast Res., Inc.*, 562 S.W.3d 138, 157–58 (Tex. App.—Houston [14th Dist.] 2018, orig. proceeding) (under Texas law, personal property generally enjoys the full panoply of fundamental property rights which “necessarily includes the right to possess, use, or transfer the property, and to exclude others”).

DeFacto Consulting Group calculated the actual cash and depreciated values for the items of personal property lost during the government’s taking based on the age and cost data provided by Plaintiffs.¹⁵³ In calculating the depreciated values, Mr. Timothy Lozos of DeFacto used the data provided, published depreciation guides, published evaluation references, cost references, judgment, and his professional experience to arrive at the following amounts due for each Plaintiffs’ loss:¹⁵⁴

Plaintiff	Replacement Cost Value	Less (Depreciation)	Actual Cash Value
Banker	\$104,106.69	\$13,514.35	\$90,592.34
Burnham	\$26,726.00	\$5,703.38	\$21,088.63
Holland	\$141,136.90	\$ 62,049.38	\$79,087.52
Micu	\$84,745.50	\$40,760.65	\$43,984.85
Popovici	\$7,215.91	\$22.50	\$7,193.41

D. Interest Owed Plaintiffs on their Just Compensation Awards.

Under federal law, a property owner who is not paid just compensation contemporaneously with the taking is entitled “to interest thereon sufficient to ensure that he is placed in as good a position pecuniarily as he would have occupied if the payment had coincided with the appropriation.” *Tech. Coll. of the Low Country v. United States*, 147 Fed. Cl. 364, 367 (2020). This Court has recognized that the proper measure is found by applying the prudent investor rule. Plaintiffs’ expert Dr. Perryman relied on the prudent investor rule in reaching his opinion that the Moody’s Corporate Bond rate of 3.62%

¹⁵³ PX-JC 867.

¹⁵⁴ PX-JC 867, at 6; Tr. 1777:7-1780:20.

as of August 30, 2017 (compounded quarterly) is an appropriate interest rate to award each Plaintiff on the total amount of just compensation as determined by this Court until an award is actually paid.

CONCLUSION: The Just Compensation Owed

There were multiple experts who provided opinions as to the market value of the property rights taken by the government from each Test Property Plaintiff. The following table presents the just compensation owed to the Test Property Plaintiffs when the lower and upper tiers of figures for each component is summed.

		Real Property	Temporary Loss	Personal Property	Total
Banker	<i>Low</i>	\$349,000	\$3,000	\$90,592.34	\$442,592.34
	<i>High</i>	\$532,000	\$33,000	\$90,592.34	\$655,592.34
Burnham	<i>Low</i>	\$153,000	\$1,500	\$21,088.63	\$175,588.63
	<i>High</i>	\$171,000	\$17,000	\$21,088.63	\$209,088.63
Holland	<i>Low</i>	\$3,300	\$0	\$91,837.52	\$95,137.52
	<i>High</i>	\$3,300	\$0	\$91,837.52	\$95,137.52
Micu	<i>Low</i>	\$222,000	\$1,875	\$43,984.85	\$267,859.85
	<i>High</i>	\$256,500	\$19,000	\$43,984.85	\$319,484.85
Popovici	<i>Low</i>	\$108,750	\$4,500	\$8,283.69	\$121,533.69
	<i>High</i>	\$334,000	\$50,000	\$8,283.69	\$392,283.69
Sidhu 603	<i>Low</i>	\$42,925	\$653	\$3,127.32	\$46,705.32
	<i>High</i>	\$53,460	\$6,750	\$3,127.32	\$63,337.32
Sidhu 604	<i>Low</i>	\$8,600	\$0	\$1,067.99	\$9,667.99
	<i>High</i>	\$27,500	\$0	\$1,067.99	\$28,567.99

Each Plaintiff suffered overwhelming devastation when the United States—by design—flooded their properties to prevent the destruction of downtown Houston and the Houston Ship Channel. The principles of equity that underlie the Fifth Amendment’s guarantee of just compensation call for a maximal award to these parties, who were forced to bear the burden exacted for the government to provide the public benefits enjoyed by those properties downstream of its flood control project.

Date: August 1, 2022

Respectfully submitted,

/s/ Daniel H. Charest

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CERTIFICATE OF SERVICE

The undersigned attorney hereby certifies that a true and correct copy of the foregoing instrument was served on all counsel of record in this Sub-Master Cause by filing it via the Court's ECF system on August 1, 2022.

/s/ Daniel H. Charest

Daniel H. Charest